

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014918**Date Inspected:** 17-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 8CW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD12A-PP070-169. The welder is identified as #067667 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-FCM-1.

Segment 8CE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD18-PP070-169. The welder is identified as #067571 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-B-P-2214-TC-U4b-FCM-1.

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This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SEG048B-046. The welder is identified as #049769 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 UT repair for CWR1618.

### Segment 7DW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD27-PP057-117. The welder is identified as #047864 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G (4F)-FCM-repair-1 UT repair for WR13655.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as SSD27-PP057-099. The welder is identified as #037996 and was observed welding in the 2G (horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G (2F)-FCM-repair-1 UT repair for WR13467.

### Segment 8BW

This QA Inspector observed Heat Straightening on the top Counter Weight Connection Plate following HSR1(B)-8596 at panel points 66 to 67.

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing of the Longitudinal Diaphragm at locations of removed temporary attachments, panel point 67 east cross beam side.

### Segment 7EW

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing of the Side Plate to Side Plate CJP splice at the corner assembly after heat straightening at panel points 68 to 71 cross beam side.

ZPMC Quality Control (QC) Inspector is identified as Zhang Hai Tao. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

### Bay 2 and Bay 6

This QA Inspector observed Final Bolt tension verification on A325 high strength bolts on the following Tower components:

#### 9M Exterior Diaphragm

Bay 2

ND1-A10

WD1-A1

WD1-A1-1

WD1-A3

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WD1-A4

Bolts verified: M16x55 DHGM160040

WD1-A2-1

WD1-A2-1

Bolts verified: M16x55 DHGM160040 and M20x55 DHGM200008

Bay 6

WD1-A5

Bolts verified: M20x55 DHGM200001

The following torque wrenches were used:

X02-114 calibration expiration date 12-3-10

X02-596 calibration expiration date 10-13-10

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hernandez,Dan	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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